DESCRIPTIONS OF TWO NEW SPECIES OF THE GENUS UNIO. FROM THE OZARK REGION OF MISSOURI.

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(Plates XXVII, XXVIII.)

The collections in which these forms occurred were made in July, 1886. The associated species were *Unio iris* Lea, *Margaritana deltoidea* Lea, and abundant, though as yet undetermined *Strepomatidæ*, of the genus *Goniobasis*. The streams were characteristic of mountain areas, being shallow, swift, and limpid, with rocky bottoms. In occasional ponds, occupying depressions which were filled at seasons of floods, were found numerous examples of *Unio subrostratus* Say, and *Anodonta grandis* Say, both of which were remarkable for their large size and perfect condition. It should be further noted that the streams from which these shells came, form a portion of the southern drainage of the Ozarks.

Unio ozarkensis, sp. nov. (Plate xxvii, Figs. 1–3 ♂, 4 ♀).

Shell smooth, elliptical, somewhat compressed laterally, inequilateral, thick, but thickest anteriorly; epidermis thin, striate towards the margins, yellowish-brown or olivaceous, marked with numerous obscure narrow green rays disposed regularly over the central portion of the disk; lines of growth rather numerous, dark, well marked; dorso-posterior margin curved; posterior umbonal slopes always eradiate, more or less biangulate, which angulations continued posteriorly mark the siphonal area and render the posterior margin biangular; umbones small, triangular, scarcely prominent, approximating, marked—in non-eroded specimens—by two or three rather coarse undulations; ligament short, thick, light brown; cardinal teeth disposed to be double in both valves, short, oblique, thick, unequally bifid, striated, the posterior division generally thickest and heaviest; lateral teeth rather short, slender, slightly curved, crenulate at extremities, in general direction forming nearly a right angle with a line drawn through the tip of the umbo and the anterior division of the cardinal tooth; anterior cicatrices deep, pit-like, striate, confluent, though in occasional specimens the *protractor-pedis* impression is distinct from the adductors and deep; posterior cicatrices distinct, that of the *adductor* muscle being usually well impressed, that of the *retractor-pedis* muscle circular, pit-like, impresed at extreme end of lateral tooth; pallial cicatrix well impressed throughout, but especially marked anteriorly; dorsal cicatrices irregularly crowded and placed near the inferior edge of the plate which connects the lateral and cardinal teeth; nacre usually silvery white, occasionally salmon or warm pink, iridescent posteriorly. Length 54.50^{mm}; breadth 15.28^{mm}; height 32.76^{mm}.

Common in Currant river, Shannon county, Mo., and in Jack's fork and Big creek, tributaries to it.

In general form this shell resembles *Unio lenticularis*, Lea, and *Unio connasaugensis*, Lea, from Tennessee, with which species it groups. Owing to the degeneration of the alcohol in which a number of specimens were collected it is impossible to give any account of the soft parts, which were destroyed. My note-book, however, shows that the ova are pinkish, and that the general characters of the ctenidia are similar to those exhibited by *Unio rubiginosus*, Lea, which species this shell in no other particulars at all resembles.

A single individual among the hundred or more found exhibited the cardinal teeth normally disposed, but the lateral teeth were reversed; *i. e.*, single in the left and double in the right valve. Instances of a similar partial reversion are not uncommon, while complete reversion, though rare, is exemplified in a number of common species.

Unio breviculus, sp. nov. (Plate xxviii, Figs 1, 1a, 1b male; 2, 2a, 2b female).

Shell smooth, ovate elliptical, inequilateral, subinflated, biangular posteriorly, circularly rounded before, somewhat incrassate; umbones slightly elevated, so much eroded that minute characters are indeterminate; ligament large, thick, black, or dark brown; epidermis yellowish horn-color, smooth, polished, rayed with dark green over the whole disk, the rays often interrupted by the lines of growth, which are numerous, but somewhat indistinct; umbonal slope rounded, depressed in the male, slightly elevated in the female; posterior outline emarginate in the female ventral of the siphonal area, dorsal outline rounded; cardinal teeth double in the left and single in the right valve, short, erect, triangular, solid, smooth, or scarcely crenulate; plate connecting laterals with cardinal teeth thick, somewhat arched; lateral teeth rather short, thick, slightly curved, smooth; anterior cicatrices distinct, large, deeply impressed; posterior cicatrices confluent, well impressed, that of the *retractor pedis* muscle at tip of base of lateral tooth but not on it; dorsal cicatrices numerous and deeply impressed in the cavity of the umbones; nacre salmon colored, occasionally white. Length 71.00^{mm}; breadth 27.20^{mm}; height 45.50^{mm}.

Animal dirty yellowish white; labial palps short, ovately triangular, adherent at base, laterally united so as to form an oval groove, midway from the extremities of which is placed the mouth. In the specimens examined only the anterior one-third of the external branchiæ contained ova. This portion was characterized by the heavy deposit of pigmentary matter at the apex of the chambers, while the remaining margins of the branchiæ were uniform in coloration with the mass of the animal. The posterior borders of the mantle were, as usual, differentiated into a series of tentacular folds; those surrounding the incurrent and excurrent orifices were yellow and brown—the remainder were black.

There is no well-known *Unio* with which this form is comparable.

While the males sustain a general resemblance to *Unio clarkianus*, Lea, and *Unio gerhardtii* Lea, the emarginate character of the female form is utterly unlike anything exhibited by the females of Lea's types.

This form occurs abundantly in the same streams as the preceding, outnumbering the other forms found combined. The specimens figured, while not the largest, are of average dimensions. Specimens of both species may be seen in the United States National Museum.

DES MOINES, IOWA, *October* 12, 1887.